

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES  
\_\_\_\_\_

Ex parte QIMING CHEN, JIE DENG  
UMESHWAR DAYAL, and  
MEICHUN HSU  
\_\_\_\_\_

Appeal No. 2005-1621  
Application 09/524,140  
\_\_\_\_\_

ON BRIEF  
\_\_\_\_\_

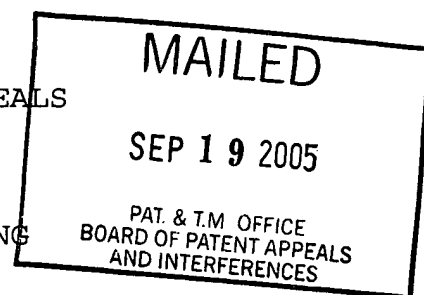
Before HAIRSTON, BARRETT and BLANKENSHIP, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 29.

The disclosed invention relates to a method and system for generating association rules for a data mining operation.



Claims 1 and 28 are illustrative of the claimed invention,  
and they read as follows:

1. A method for generating association rules comprising:

in a processing system, receiving a volume cube that  
represents the purchase volume of customers;

in the processing system, generating scoped association  
cubes, a population cube and a base cube based on the volume  
cube, wherein the scoped association cubes comprise a plurality  
of bases from distinct data sources; and

in the processing system, deriving a confidence cube and a  
support cube of an association rule based on the association  
cube, population cube, and the base cube,

wherein said volume cube, association cube, population cube,  
base cube, and confidence cube comprise multi-dimensional data  
structures that have elements comprising one or more aggregated  
dimensions and that are processed in a multi-dimensional  
database.

28. A system, comprising:

a plurality of local stations having a local computation  
engine for mining and summarizing the local transaction data and  
for generating local customer profile cubes; and

at least one global station coupled to the plurality of the  
local stations, the global station having a global computation  
engine for receiving the local customer profiles, merging and  
mining the local profile cubes,

and generating global profile cubes and scoped association  
rules, the scoped association rules comprising a plurality of  
bases from distinct data sources and based on said local profile  
cubes.

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The references relied on by the examiner are:

Castelli et al. (Castelli)	5,978,788	Nov. 2, 1999
Megiddo et al. (Megiddo)	6,182,070	Jan. 30, 2001
		(filed Aug. 21, 1998)

Claims 1 through 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Megiddo in view of Castelli.

Reference is made to the briefs and the answer for the respective positions of the appellants and the examiner.

#### OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 1 through 29.

Appellants argue inter alia that all of the claims on appeal are directed to scoped association cubes or scoped association rules, and that neither Megiddo nor Castelli discloses generating scoped association cubes or scoped association rules (brief, pages 4 and 5; reply brief, pages 2 and 3). We agree with appellants' argument. In Megiddo, one or more synthetic databases are generated from a dataset, and, thereafter, association rules having a similar probability threshold are discovered for each synthetic database (column 3, lines 45 through 51). Megiddo determines the statistical significance of association rules mined from the dataset (column 3, lines 42

through 45), but does not generate scoped association cubes or scoped association rules as set forth in the claims on appeal.

Castelli generates multi-representations of a data cube by splitting the data cube into a plurality of dimensions. In response to the splitting step, Castelli then generates multi-resolutions and/or multi-projections of the data cube.

Thereafter, Castelli reconstructs the data cube from the multi-resolutions and/or multi-projections for data compression (column 3, lines 14 through 21; column 6, lines 16 through 25; Abstract). Castelli is silent as to scoped association cubes or scoped association rules.


In summary, the obviousness rejection of claims 1 through 29 is reversed because Megiddo and Castelli neither teach nor would have suggested to the skilled artisan scoped association cubes and scoped association rules.

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### DECISION

The decision of the examiner rejecting claims 1 through 29 under 35 U.S.C. § 103(a) is reversed.

REVERSED

  
KENNETH W. HAIRSTON  
Administrative Patent Judge

  
LEE E. BARRETT  
Administrative Patent Judge

Howard B. Blankenship  
HOWARD B. BLANKENSHIP  
Administrative Patent Judge

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Hewlett Packard Co.  
P.O. Box 272400  
3404 E. Harmony Road  
Intel Property Admin.  
Fort Collins, CO 80527